CLAIMS

1.   A reduced keyboard system for text input on an electronic device, comprising;

   (a) a virtual keyboard comprising a plurality of keys;

   (b) an input device associated with said virtual keyboard, wherein text input
       is performed by placing said input device onto the virtual key of said
       virtual keyboard that corresponds to the first character of a word, sliding
       said input device to subsequent virtual keys corresponding to subsequent
       characters of a word, and lifting said input device from said virtual
       keyboard so as to produce a bi-dimensional input pattern, and;

   (c) a dictionary database associated with said virtual keyboard, said
       dictionary database comprising a plurality of classes wherein each of
       said classes contain words that have first and last letters corresponding
       to predetermined keys of said virtual keyboard;

wherein said bi-dimensional input pattern is used in order to determine the identity of the
inputted word at least partially based on comparison between said bi-dimensional input pattern
and patterns generated from words contained within the class of said dictionary database to
which the inputted word belongs.

2.   A reduced keyboard system according to claim 1, wherein the keyboard has any
QWERTY arrangement.

3.   A reduced keyboard system according to claim 2, wherein the keyboard has a concave
curvature.

4.   A reduced keyboard system according to claim 2, wherein the keyboard has a convex
curvature.

5.   A reduced keyboard system according to claim 1, wherein the keyboard has a 6X5 key
array arrangement.

6.   A reduced keyboard system according to claim 1, wherein the keyboard has a 4X4 key
array arrangement.

7.   A reduced keyboard system according to claim 1, wherein at least one of said keys of
said keyboard contains at least two characters.

8.   A reduced keyboard system according to claim 1, wherein the keyboard comprises a
plurality of concentric circles.

9. A reduced keyboard system according to claim 8, wherein the keyboard comprises 13 keys, and wherein the concentric circles comprise an outer circle having 8 keys, a middle circle having 4 keys, and an inner circle having one key.

10. A reduced keyboard system according to claim 9, wherein each of said keys corresponds to two characters of the alphabet.

11. A reduced keyboard system according to claim 8, wherein the keyboard comprises 16 keys, and wherein the concentric circles comprise an outer circle having 10 keys, a middle circle having 5 keys, and an inner circle having one key.

12. A reduced keyboard system according to claim 1, wherein words belonging to a specific class of said dictionary database are ordered according to curvilinear length.

13. A reduced keyboard system according to claim 1, further comprising means for segmenting the bi-dimensional input pattern into monotonous segments.

14. A reduced keyboard system according to claim 1, further comprising means for applying a line simplification algorithm to said bi-dimensional input pattern.

15. A reduced keyboard system according to claim 1, further comprising means for computing the matching distance between the bi-dimensional input pattern and patterns generated from a plurality of words to the dictionary database class to which the inputted word belongs.

16. A reduced keyboard system according to claim 1, further comprising means for determining possible intermediate letter candidates of the inputted word.

17. A reduced keyboard system according to claim 16, wherein said means for determining possible intermediate letter candidates allows for input errors.

18. A reduced keyboard system according to claim 1, further comprising means for allowing the user to use the keyboard as a conventional keystroke keyboard.

19. A reduced keyboard system according to claim 1, further comprising means for allowing the user to use the keyboard as a conventional keystroke keyboard, wherein at least one key of said keyboard comprise two characters and wherein a bi-dimensional input pattern is generated from the keys which are keystroked during the input of a word for enabling word recognition and disambiguation.

20. A method for text input on an electronic device, using a reduced virtual keyboard associated with said electronic device, comprising;

(a) placing an input device onto the virtual key of a reduced virtual keyboard that corresponds to the first character of a word, sliding said input device to subsequent virtual keys corresponding to subsequent characters of said word, and lifting said input device from said virtual keyboard so as to produce a bi-dimensional input pattern;

(b) providing a dictionary database associated with said virtual keyboard, said dictionary database comprising a plurality of classes wherein each of said classes contain words that have first and last letters corresponding to predetermined keys of said virtual keyboard;

(c) comparing said bi-dimensional input pattern with patterns generated from words belonging to the class of said dictionary database to which the inputted word belongs, and;

(d) identifying at least one solution for the inputted word based on the comparison carried out in step (c).

21. A method according to claim 20, wherein words belonging to a specific class of said dictionary database are ordered according to increasing or decreasing curvilinear length.

22. A method according to claim 20, further comprising applying a line simplification algorithm to said bi-dimensional input pattern.

23. A method according to claim 20, further comprising segmenting said bi-dimensional input pattern into monotonous segments.

24. A method according to claim 20, further comprising computing the matching distance between the bi-dimensional input pattern and patterns generated from a plurality of words belonging to the dictionary database class to which the inputted word belongs.

25. A method according to claim 20, further comprising determining possible intermediate letter candidates of the inputted word.

26. A method according to claim 25, wherein said determining possible intermediate letter candidates of the inputted words allows for input errors.

27. A method according to claim 20, further comprising applying geometrical filters to said bi-dimensional input pattern.

28. A method according to claim 20, wherein the virtual keyboard has a *QWERTY* arrangement.

29. A method according to claim 28, wherein the keyboard has a concave curvature.

30. A method according to claim 28, wherein the keyboard has a convex curvature.

31. A method according to claim 20, wherein at least one of the keys of said virtual keyboard contains at least two characters.

32. A method according to claim 20, wherein the keyboard comprises a plurality of concentric circles.

33. A method according to claim 32, wherein the keyboard comprises 13 keys, and wherein the concentric circles comprise an outer circle having 8 keys, a middle circle having 4 keys, and an inner circle having one key.

34. A method according to claim 33, wherein each of said keys corresponds to at least two characters of the alphabet.

35. A method according to claim 32, wherein the keyboard comprises 16 keys, and wherein the concentric circles comprise an outer circle having 10 keys, a middle circle having 5 keys, and an inner circle having one key.

36. A hardware keyboard for use with an electronic device comprising three concentric circles, wherein at least one of the keys of said keyboard comprises two characters, said keyboard further comprising means for generating a bi-dimensional input pattern for a word inputted using keystrokes and for recognizing the inputted word based on said bi-dimensional input pattern.